

CLAIMS

1. A carriage for a roller skate in which each wheel is independently suspended on the carriage by a resilient suspension which includes means for constraining the wheel to follow a predetermined path with respect to a body of the carriage upon deflection of the resilient suspension, wherein the said path includes a component of motion directed towards the rear of the carriage with respect to the direction of travel thereof.

2. A roller skate carriage as claimed in Claim 1, in which the path of movement of a wheel upon displacement of the suspension is non-linear.

3. A roller skate carriage as claimed in ^{Claim 1} ~~any preceding Claim~~, in which the path of the suspension travel of a wheel varies in direction with a variation in the magnitude of the excursion from a static load position.

4. A roller skate carriage as claimed in ^{Claim 1} ~~any of Claims 1, 2 or 3~~, in which the said constraining means comprise one or more trailing arm for respectively carrying each wheel.

5. A roller skate carriage as claimed in Claim 4, wherein the orientation of each trailing arm in its rest position can be varied.

6. A carriage for a roller skate in which each wheel is independently suspended on the carriage by a resilient suspension, which resilient suspension includes means for constraining the wheel to follow a predetermined path with respect to a body of the carriage upon deflection of the resilient suspension, (in which the constraining means comprise one or more pivoted arm for respectively carrying each wheel, wherein the next position of each arm can be varied.)

7. A roller skate carriage as claimed in ~~any preceding claim~~ ^{Claim 6}, in which the resilient action of the suspension is exerted by a compression spring.

8. A roller skate carriage as claimed in Claim 7, in which the compression spring is a coil of metal or plastics.

9. A roller skate carriage as claimed in Claim 7, in which the compression spring is a chamber of compressed gas having a piston sealingly displaceable within it.

10. A roller skate carriage as claimed in ~~any of Claims 1 to 6~~ ^{Claim 1}, in which the resilient suspension includes a leaf spring.

11. A roller skate carriage as claimed in ~~claim~~ 10, in which the leaf spring is generally U-shape and the wheel

is carried by one arm thereof via an axle and a bearing permitting the wheel to rotate with respect to the leaf spring.

5 12. A roller skate carriage as claimed in ^{Claim 1} ~~any of Claims 1 to 6~~, in which the resilient action of the suspension is exerted by a torsion spring.

10 13. A roller skate carriage as claimed in ^{Claim 1} ~~any one of Claims 1 to 6 or 12~~, wherein the torsion spring is a coil spring in torsion.

15 14. A roller skate carriage as claimed in Claim 13, wherein the torsion spring is a helical or spiral coil spring.

20 15. A roller skate carriage as claimed in ^{Claim 1} ~~any preceding claim~~, in which the suspension for each wheel includes a resilient member acting both to exert a resilient biasing force urging the wheel towards one end of its path of suspended travel with respect to the carriage and as a wheel guide member at least partly defining the path of travel of the wheel.

25 16. A roller skate carriage as claimed in ^{Claim 1} ~~any preceding claim~~, in which the resilient suspension of each wheel thereof is substantially undamped.

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17. A roller skate carriage as claimed in, ^{Claim 1} ~~any preceding~~
~~claim~~, in which the wheels are carried by respective
pivoted trailing arms mounted for rotation about
respective axes pivoting substantially parallel to the
5 axis of rotation of the wheel carried thereby.

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18. A roller skate carriage as claimed in Claim 17, in
which each said pivoted trailing arm houses a respective
torsion spring urging the arm to turn in a first
10 direction about a first axis with respect to the carriage
body.

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19. A roller skate carriage as claimed in, ^{Claim 1} ~~any preceding~~
~~claim~~, in which the resilient force acting on each wheel
15 is independently adjustable by respective adjustment
means.

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20. A roller skate carriage as claimed in Claim 19, in
which the adjustment of the resilient suspension force is
20 effected by adjustment of the angular position of a
locating member held in place by frictional engagement
with a fixed part of the carriage or a member carried
thereby.

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21. A roller skate carriage as claimed in, ^{Claim 1} ~~any preceding~~
~~claim~~, in which there are provided abutment stops on the
body of the carriage, engaged by a movable part of the
suspension whereby to determine the maximum excursion

travel of a wheel suspension.

22. A roller skate carriage as claimed in Claim 21, in which the said abutment stops are adjustable whereby to
5 adjust the said maximum excursion position of a wheel.

23. A roller skate carriage as claimed in, ^{Claim 1} ~~any preceding~~
~~claim~~, in which the body of the carriage includes or
comprises at least one elongate plate-like member on
10 which a plurality of individual wheel suspensions are
carried with the wheels in-line with one another.

24. A roller skate carriage as claimed in, ^{Claim 1} ~~any preceding~~
~~claim~~, in which the wheels are arranged in-line with one
15 another along the body of the carriage in a single line.

25. A roller skate carriage as claimed in, ^{Claim 1} ~~any of Claims~~
~~1 to 24~~, in which the wheels are arranged in co-axial
pairs on the body of the carriage.

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26. A roller skate comprising a carriage as claimed in
^{Claim 1} ~~any preceding claim~~, secured fixed and attached to a boot
for receiving and supporting the foot of a user.

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